

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Art Unit 2625

Rodriguez et al. Confirmation No. 5733

Application No.: 10/723,181

Filed: November 26, 2003

For: AUTOMATED METHODS FOR
DISTINGUISHING COPIES FROM
ORIGINAL PRINTED OBJECTS

VIA ELECTRONIC FILING

Examiner: S. Kau

Date: May 17, 2010

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

Appellants request review of the final rejection in the above-identified application. No amendment is being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheets. (No more than 5 pages are provided.)

Date: May 17, 2010

Respectfully submitted,
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REASONS FOR REQUEST FOR PRE-APPEAL REVIEW

Sir:

Responsive to the final Office Action dated December 16, 2009, Applicants file herewith a notice of appeal, a request for pre-appeal brief review, and the following reasons for requesting the pre-appeal review.

Claims 1, 2, 8, 14, 17-19 are rejected under 35 U.S.C. Section 102(e) as being anticipated by U.S. patent 6,091,844 to Fujii et al. (“Fujii”). Fujii does not offer any more relevant teaching than U.S. patent 5,781,653 to Okubo, which was successfully distinguished in response to the last Action. Both Fujii and Okubo disclose a method in a photocopier for detecting a specified pattern in order to prevent the photocopier from copying a document (namely, a banknote in the case of Fujii). See Fujii at col. 3, lines 15-20. Like Okubo, Fujii does not teach: “based on evaluating the machine readable auxiliary signal, using a programmed computing device to determine whether the printed object is a copy or an original” as recited in the novel combination of claim 1. Fujii’s method cannot determine whether a printed object is a copy or an original because a copy of the banknote has the same specified pattern as an original. Therefore, the detection of the specified pattern does not indicate whether the image being processed is from an original or a copy of the banknote. The photocopier in Fujii will prohibit copying of both the original and a copy of that original without determining whether the printed object is a copy or an original as claimed.

The Office asserts that Fujii teaches, for example, “the change causing a divergence or convergence of a characteristic of the print structures such that the machine readable signal becomes more or less detectable,” because allegedly “print structures...are determined or judged for matching with the reference pattern or not.” There is no teaching in Fujii that a copy operation makes a change in the specified pattern that makes it more or less detectable. There is simply no teaching in Fujii that the pattern is evaluated to determine whether a document is a copy or an original as claimed. Instead, Fujii simply teaches how to detect the pattern, and detection does not indicate whether the document from which it is detected is a copy or an original. Therefore, for at least these reasons, claim 1 is not anticipated.

Fujii does not anticipate claim 14 for similar reasons as claim 1.

Regarding claim 2, Fujii’s detection of a pattern in color components provides no teaching or even suggestion of “the set of print structures include a first color and a second color that change differently in response to a copy operation” as recited in the claimed combination.

Regarding claim 8, Fujii provides no teaching of “the auxiliary signal is embedded by varying continuity of line structures.” The possibility that the pattern in Fujii can be different shapes does not mean that Fujii discloses the elements of claim 8, and it does not in any way.

Regarding claims 17 and 19, Fujii’s method simply detects a pattern to determine whether a document is a banknote. In addition to the distinctions already mentioned, Fujii does not teach a print structure comprising a color that changes in response to a copy operation, where that print structure is used to embed a machine readable auxiliary signal that is evaluated to determine whether the printed object is a copy or an original as claimed.

Fujii provides absolutely no teaching of the elements of claim 18.

Claims 15, 16, 20 and 21 are rejected under 35 U.S.C. Section 102(b) as being anticipated by U.S. Patent No. 5,291,243 to Heckman et al. (“Heckman”).

Regarding claim 15, Heckman does not teach: “using a set of two or more print structures that change in response to a copy operation, the change causing a divergence or convergence of a characteristic of the print structures such that the machine readable signal becomes more or less detectable” and “using a programmed computing device to create a metric to detect the convergence or divergence from an image scanned of a suspect printed object to determine whether the suspect printed object is a copy or an original.” Heckman teaches a latent

image that becomes visible when copied. The Office argues that since certain features disclosed in Heckman are sensitive to reproduction, “any alters of the above features can be identified.” While the latent image becomes visible when copied, and thus might be seen by a human, there is no teaching of using a programmed computing device to create a metric to detect the convergence or divergence from an image scanned of a suspect printed object. Therefore, Heckman does not anticipate claim 15. It also does not anticipate claims 16, 20 and 21 for similar reasons.

The remaining rejections cite secondary references that fail to teach the elements of the independent claims that are missing from Fujii. Therefore, the combination of these references with Fujii cannot render these claims obvious. Additional rationale indicating why the Section 103(a) rejections should be withdrawn follows below.

Claim 3 is rejected under 35 U.S.C. Section 103(a) as being unpatentable over Fujii and USP 5,824,447 to Tavernier et al. (“Tavernier”). Tavernier teaches printing with a pigment having a color outside the color gamut printable by normal photocopiers. It does not teach or suggest the use of such a pigment to embed a machine readable signal that has first and second colors that change differently in response to a copy operation. There is no teaching of using a programmed device to determine, based on evaluating such a machine readable auxiliary signal, whether the printed object is a copy or an original.

Claim 4 is rejected under 35 U.S.C. Section 103(a) as being unpatentable over Fujii and USP 6,434,322 to Kimura et al. Kimura teaches an embedding technique in which copy control information is embedded by changing luminance. This change, which is made explicitly for embedding copy control information, is unrelated to a change in luminance of an embedded auxiliary signal that is in response to a copy operation as claimed. Kimura is not concerned with evaluating a machine readable signal to determine whether a printed object is a copy or an original. Therefore, the cited teachings are not relevant to claim 4.

Claim 5 is rejected under 35 U.S.C. Section 103(a) as being unpatentable over Fujii and USP 6,198,545 to Ostromoukhov et al. The Office is correct in noting that certain variations in the halftoning period are useful to prevent non authorized copies of images as noted in Ostromoukhov, but Ostromoukhov does not teach a method for evaluating these variations in a machine readable signal to determine whether a printed object is a copy or an original. This

reference further does not teach the elements of claim 1 missing from Fujii, and as such, the combination does not teach all of the elements of claim 5.

Claim 6 is rejected under 35 U.S.C. Section 103(a) as being unpatentable over Fujii and USP 5,687,297 to Coonan et al. Coonan's method is used for "tuning the appearance and controlling dot growth of bitmap images on a printing system." There is no suggestion of using this teaching for determining whether a printed object is a copy or an original.

Claims 7 is rejected under 35 U.S.C. Section 103(a) as being unpatentable over Fujii and USP 4,884,828 to Burnham et al. There is no teaching that the aliasing is used in conjunction with print structures of an embedded machine readable signal as recited in claim 7 to determine whether a printed object is a copy or an original.

Claims 9-10 are rejected under 35 U.S.C. Section 103(a) as being unpatentable over Fujii, Burnham and USP 5,074,596 to Castagnoli. Burnham and Castagnoli fail to teach the elements of these claims missing from Fujii, and as such, even if all three references were combined, they would not teach all of the elements of these claims. There is no reasonable basis for combining the disparate teachings of these references to make the claimed invention of claims 9-10.

Claims 11, 12 and 13 are rejected under 35 U.S.C. Section 103(a) as being unpatentable over Fujii and USP 7,027,189 to Umeda. Umeda teaches a method of embedding a dot pattern, but fails to provide relevant teaching regarding detecting changes of print structures of an embedded auxiliary signal to determine whether a printed document is a copy or an original. The combined teachings fail to teach all of the elements of claims 11-13.

For the above reasons, the claims are patentable.

Respectfully submitted,

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